Claims

1. (Currently Amended): A method for processing an image, comprising the steps of:

    comparing a first image intensity associated with a subject image portion with a second image intensity associated with an adjacent image portion;

    determining an image intensity difference between the first image intensity and the second image intensity;

    classifying the subject image portion as a candidate edge portion in response to a determination that the first image intensity is less than the second image intensity and a determination that the image intensity difference is greater than a predetermined threshold image intensity difference;

    <u>determining whether the adjacent image portion is a non-edge portion;</u>

    determining whether the candidate edge portion is a true edge portion; and

    enhancing the true edge portion by <u>increasing the difference between the true edge portion and the non-edge portion</u>~~associating the subject image portion with a third image intensity~~, wherein the third image intensity is less than the first image intensity<u>, thereby sharpening the true edge portion</u>.

2. (Original): The method of Claim 1, wherein the step of determining whether the candidate edge portion is a true edge portion, comprises the step of determining whether the candidate edge portion is adjacent to at least one second candidate edge portion.

3. (Original): The method of Claim 2, wherein the step of determining whether the candidate edge portion is a true edge portion, further comprises the step of determining whether the candidate edge portion is adjacent to the second candidate edge portion and to a third candidate edge portion.

4. (Previously Amended): The method of Claim 3, wherein the candidate edge portion, the second candidate edge portion and the third candidate edge portion form a line.

5. (Original): The method of Claim 1, wherein the image is a digitized image.

6. (Original): The method of Claim 5, wherein the subject image portion is a pixel.

7. (Original): The method of Claim 5, wherein the adjacent image portion is a pixel.

8. (Original): The method of Claim 5, wherein the image is a frame of a video stream.

9. (Original): The method of Claim 8, wherein the image intensity is measured in luminance.

10. (Original): The method of Claim 8, wherein the image intensity is measured in luminance and chrominance.

11. (Original): The method of Claim 1, wherein the image is an image-type selected from the group consisting of:
 animation;
 computerized banners;
 real-time streaming video;
 stored video; and
 gaming graphics.

12. (Currently Amended): A system for enhancing a digitized image, comprising:
 a decoder ~~operative~~ configured to receive an encoded digitized image and to expand the encoded digitized image to generate a decoded digitized image;
 a post-processing unit ~~operative~~ configured to generate a processed image by filtering the decoded digitized image; and
 an edge enhancer ~~operative~~ configured to detect ~~an~~ candidate edge and a non-edge in the processed image, determine if the candidate edge is a true edge or a non-edge, and to ~~enhance~~ sharpen the true edge in the processed image by increasing the difference between the true edge and the non-edge, thereby sharpening the true edge.

13. (Original): The system of Claim 12, wherein the edge is a portion of the decoded digitized image separating a first image portion of substantially uniform image intensity from a second image portion of substantially uniform image intensity.

14. (Original): The system of Claim 12, wherein the edge is a line in the decoded digitized image.

15. (Currently Amended): The system of Claim 12, wherein the edge enhancer is further ~~operative~~ configured to detect the edge by comparing a subject portion of the decoded digitized image with a first adjacent portion of the decoded digitized image and with a second portion of the decoded digitized image and determining that the subject portion is associated with a lower image intensity level than a first image intensity associated with the first adjacent portion of the decoded digitized image and a second image intensity associated with the second adjacent portion of the decoded digitized image.

16. (Previously Amended): The system of Claim 12, wherein the post-processor removes an image flaw from the decoded digitized image, in response to a determination that an image intensity of a pixel associated with the image flaw does not differ from at least one surrounding pixel by more than a threshold value.

17. (Original): The system of Claim 12, wherein the post-processor adjusts the image flaw in the decoded digitized image, by modifying an image intensity of a pixel associated with the image flaw to correspond to a median image intensity value of at least one surrounding pixel.

18. (Currently Amended): A method for detecting and enhancing an edge in a decoded digitized image, comprising the steps of:

    determining a first image intensity associated with a first pixel in the decoded digitized image;

    determining a second image intensity associated with a second pixel in the decoded digitized image;

    determining a third image intensity associated with a third pixel in the decoded digitized image;

classifying the first pixel as a first candidate edge pixel in response to a determination that the first image intensity is less than the second image intensity and is less than the third image intensity;

determining whether the first pixel is adjacent to a second candidate edge pixel;

determining whether the second pixel is adjacent to a third candidate edge pixel;

classifying a fourth pixel as a non-edge edge pixel;

classifying the first pixel as a true edge pixel in response to a determination that the first pixel is adjacent to the second candidate edge pixel and the second candidate edge pixel is adjacent to the third candidate edge pixel; and

enhancing the true edge pixel by increasing the difference between the true edge pixel and the non-edge pixel, associating a fourth image intensity with the true edge pixel, the fourth image intensity being lower than the first image intensity, thereby sharpening the true edge pixel.

19. (Original): The method of Claim 18, further comprising the steps of:

associating a fifth image intensity with the second pixel, the fifth image intensity being higher than the second image intensity; and

associating a sixth image intensity with the third pixel, the sixth image intensity being higher than the third image intensity.

20. (Original): The method of Claim 18, further comprising the steps of:

determining a background color associated with the first pixel;

determining a quality level of the digitized image; and

selecting the fourth image intensity based on the background color and the quality level.

21. (Currently Amended) A method for enhancing a digitized image, comprising the steps of:

receiving an encoded digitized image an encoded digitized image;

expanding the encoded digitized image to generate a decoded digitized image;

generating a processed image by filtering the decoded digitized image; and

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detecting a non-edge in the processed image;

detecting an candidate edge in the processed image;

determining if the candidate edge is a true edge or a non-edge;

~to~ enhanceing the true edge in the processed image.; by increasing the difference between the true edge and the non-edge, thereby sharpening the true edge.

22. (Previously Presented): The method of Claim 21, wherein the edge is a portion of the decoded digitized image separating a first image portion of substantially uniform image intensity from a second image portion of substantially uniform image intensity.

23. (Previously Presented): The method of Claim 21, wherein the edge is a line in the decoded digitized image.

24. (Previously Presented): The method of Claim 21, wherein the step of detecting an edge further comprises comparing a subject portion of the decoded digitized image with a first adjacent portion of the decoded digitized image and with a second portion of the decoded digitized image and determining that the subject portion is associated with a lower image intensity level than a first image intensity associated with the first adjacent portion of the decoded digitized image and a second image intensity associated with the second adjacent portion of the decoded digitized image.

25. (Previously Presented): The method of Claim 21, further comprising removing an image flaw from the decoded digitized image, in response to a determination that an image intensity of a pixel associated with the image flaw does not differ from at least one surrounding pixel by more than a threshold value.

26. (Previously Presented): The method of Claim 21, further comprising adjusting an image flaw in the decoded digitized image, by modifying an image intensity of a pixel associated with the image flaw to correspond to a median image intensity value of at least one surrounding pixel.